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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/531,977	03/20/2000	Barry McKay Crooks	1999-0558	6958

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Mr S H Dworetsky
AT&T Corporation
PO Box 4110
Middletown, NJ   07748

EXAMINER
RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
2665	2

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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PREVIOUSLY DOCKETED
PREVIOUSLY ABANDONED
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PTO-90C (Rev. 07-01).

Office Action Summary	Application No.	Applicant(s)
	09/531,977	CROOKS, BARRY MCKAY
	Examiner	Art Unit
	Daniel J. Ryman	2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 March 2000</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 March 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Information Disclosure Statement

1.   The listing of references in the specification is not a proper information disclosure

statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information

submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be

incorporated into the specification but must be submitted in a separate paper." Therefore, unless

the references have been cited by the examiner on form PTO-892, they have not been

considered. Applicant lists a co-pending application which Examiner deems pertinent to current

application.

Drawings

2.   Figures 1-3 should be designated by a legend such as --Prior Art-- because only that

which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected

drawings are required in reply to the Office action to avoid abandonment of the application. The

objection to the drawings will not be held in abeyance.

Specification

3.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

        The abstract should be in narrative form and generally limited to a single paragraph on a
separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed
150 words in length since the space provided for the abstract on the computer tape used by the
printer is limited. The form and legal phraseology often used in patent claims, such as "means"
and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist
readers in deciding whether there is a need for consulting the full patent text for details.

        The language should be clear and concise and should not repeat information given in the
title. It should avoid using phrases which can be implied, such as, "The disclosure concerns,"
"The disclosure defined by this invention," "The disclosure describes," etc.

4.   The abstract of the disclosure is objected to because it exceeds 150 words in length.

Correction is required. See MPEP § 608.01(b).

5.   The disclosure is objected to because of the following informalities: on page 8, line 15

"local LAN 106" should be "destination LAN 106".

        Appropriate correction is required.

6.   Examiner requests that Applicant update application information on page 1, lines 5-8.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raab et al

(USPN 5,850,397) in view of Rao et al (USPN 6,105,065) in further view of Hansen et al (USPN

6,442,144).

9.   Regarding claims 1, 7, and 13, Raab discloses a method and computer program product

for identifying multiple connections and an apparatus for mapping multiple connections between

a destination local area network (LAN) (local sphere) and a local LAN (destination sphere)

where said LANs are coupled by an ATM-based wide area network (WAN) (enterprise network)

(Table 1: ATM; col. 2, lines 34-45; and col. 9, lines 24-44) where it is obvious that the enterprise

network could be ATM since one of the protocols discussed is ATM and where it would also be

obvious to use a computer program to implement the method since computer programs are less

expensive and more flexible than hardware, wherein each of said LANs includes a router (col. 3,

line16-col. 4, line 20), and wherein said WAN can include at least two ATM switches (col. 3,

line16-col. 4, line 20 and Table 1: ATM, Sphere devices are ATM switches), the method

comprising the steps of, the computer program product comprising code for, and the apparatus

comprising means for: identifying one or more ATM interfaces on each router connected to

another network (col. 7, lines 17) where if the spheres are mixed-media then it is obvious that the

ATM interfaces define connections through the global network that are ATM connections;

retrieving and storing connectivity, configuration, and end device attachment information from

each interface, thereby identifying a list of entries (col. 5, lines 36-45); retrieving and preparing

WAN configuration data so as to permit a LAN-to-WAN compilation of data (col. 2, lines 42-

51); and retrieving and storing the associated configuration information and components of the

WAN along with the entries of the list (col. 2, lines 42-51) where configuration information is

collected for all spheres by the global topology agent. Raab possibly does not expressly disclose

using this method to identify a single connection; however, it is obvious that if this method is

used to map all the connections in an entire network that the same method could be used to map

a single connection in a network. Raab possibly does not expressly disclose that the connectivity,

configuration, and end device attachment information includes an IP address, a subnet mask, and

a virtual circuit identifier; using the IP address in conjunction with the subnet mask stored for

each ATM interface in the list to derive a destination IP address, thereby identifying a pair of

network IP addresses; identifying a virtual circuit identifier value associated with each of the pair

of network IP addresses; retrieving and preparing WAN configuration data so as to permit a

LAN-to-WAN correlation; and retrieving and storing the associated configuration information

and components of the WAN along with the entries of the list. Rao discloses, in a system for

displaying real-time topological information about a network, retrieving and storing a node

identifier where an IP address is a well known node identifier and where it is well known

connectivity information (col. 8, line 48-col. 9, line 40); information concerning which LAN the

node belongs to where a subnet mask is well known information concerning which LAN the

node belongs to and where it is well known connectivity information (col. 8, line 48-col. 9, line

40); and a call name where a virtual circuit identifier is a well known call name and where it is

well known configuration information (col. 4, lines 4-17 and col. 8, line 48-col. 9, line 40). It

would have been obvious to one of ordinary skill in the art at the time of the invention to have

the connectivity, configuration, and end device attachment information includes an IP address, a

subnet mask, and a virtual circuit identifier such an IP address, a subnet mask, and a virtual

circuit identifier are well known connectivity and configuration information. Rao further

discloses finding a destination (target) address and source address in order to define a connection

(col. 8, line 48-col. 9, line 40); identifying a virtual circuit identifier value associated with each

of the pair of network IP addresses (col. 4, lines 4-17 and col. 8, line 48-col. 9, line 40);

retrieving and preparing LAN configuration data so as to permit a LAN to LAN correlation

(abstract and col. 10, lines 26-29) in order to determine which nodes are in communication with

each other where Raab discloses doing LAN to WAN comparisons to determine which nodes are

in communication with each other. It would have been obvious to one of ordinary skill in the art

at the time of the invention to identify a virtual circuit identifier value associated with each of the

pair of network IP addresses in order to define a particular connection and to retrieve and prepare

LAN configuration data so as to permit a LAN to WAN correlation in order to determine which

nodes are in communication with each other. Raab in view of Rao possibly does not expressly

disclose using the IP address in conjunction with the subnet mask stored for each ATM interface

in the list to derive a destination IP address, thereby identifying a pair of network IP addresses;

however, Raab in view of Rao does disclose finding a destination address in order to identify a

pair of network addresses of the endpoints of a call (Rao: col. 8, line 48-col. 9, line 40). Hansen

discloses that it is well known in the art to use an IP address in conjunction with the subnet mask

to derive a destination IP address (col. 1, lines 26-39). It would have been obvious to one of

ordinary skill in the art at the time of the invention to use an IP address in conjunction with the

subnet mask stored for each ATM interface in the list to derive a destination IP address since

such methods are well known in the art to find a destination address. Raab in view of Rao

possibly does not expressly disclose that the connectivity, configuration, and end device

attachment information includes a city and a state and associating the city and state values of the

ATM interfaces on the LANs with the city and state values on the WAN; however Raab in view

of Rao does disclose associating the information on the LAN with the information on the WAN

(Raab: col. 2, lines 34-45 and Rao: abstract and col. 10, lines 26-29). Hansen discloses, in a

system for compiling a graphical topology of a network, using management information base

(col. 3, line 41-col. 4, lines 18 and col. 4, lines 29-42) to discover attributes of each device,

where the attributes are used to construct a map grouping the network subnets into regions such

as state and city (Fig. 5 and col. 6, lines 54-62). Although it is not expressly stated that the

attributes include a city and state, it is obvious that the attributes would contain such information

since city and state information is needed to construct a geographical map of a network. It would

have been obvious to one of ordinary skill in the art at the time of the invention to have city and

state information included in the connectivity, configuration, and end device attachment

information and to associate the information on the LAN with the information on the WAN in order to compile a geographical accurate representation of a network or network path such that the network and path accurately reflect the connections involved in the network and path.

10.   Regarding claims 2, 8, and 14, referring to claims 1, 7, and 13, Raab in view of Rao in further view of Hansen discloses that identifying one or more ATM interfaces on each router comprises the step of, code for, and means for: querying LAN management information including at least one of a network management system database, router command, router configuration files, and router management information base objects (Raab: col. 5, lines 43-49; Rao: col. 4, lines 27-41; and Hansen: col. 3, line 41-col. 4, line 18 and col. 4, lines 29-42).

11.   Regarding claims 3, 9, and 15, referring to claims 1, 7, and 13, Raab in view of Rao in further view of Hansen discloses that retrieving and storing an IP address, a subnet mask, a city, a state, and a virtual circuit identifier value from each ATM interface comprises the step of, code for, and means for: querying LAN management information including at least one of a network management system database, router command, router configuration files, and router management information base objects (Raab: col. 5, lines 43-49; Rao: col. 4, lines 27-41; and Hansen: col. 3, line 41-col. 4, line 18 and col. 4, lines 29-42).

12.   Regarding claims 4, 10, and 16, referring to claims 1, 7, and 13, Raab in view of Rao in further view of Hansen discloses the step of, code for, and means for creating a connection components template (Raab: col. 12, lines 5-11; Rao: col. 8, lines 11-30; and Hansen: col. 4, lines 59-67).

13.   Regarding claims 5, 11, and 17, referring to claims 1, 7, and 13, Raab in view of Rao in further view of Hansen discloses that the LANs can be connected in order to form an enterprise

network (Raab: col. 9, lines 24-34). It is also well known in the art to have multiple LANs connected by a single subnet where it is obvious that this is done in order to efficiently use the addresses allocated to each subnet. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the network IP addresses be part of the same subnet since having multiple LANs be connected to a single subnet is a well known method used to efficiently use the addresses allocated to a subnet.

14.   Regarding claims 6, 12, and 18, referring to claims 5, 11, and 17, Raab in view of Rao in further view of Hansen that using the IP address in conjunction with the subnet mask stored for each ATM interface in the list to derive a destination IP address comprises: the step of, code for, and means for matching pairs of IP addresses using their subnet addresses (Hansen: col. 2, lines 63-65; col. 4, lines 61-63; and col. 5, lines 8-21) where although not expressly stated, it is suggested that the matching is done using the subnet addresses since the addresses are grouped into subnets using the IP address and subnet mask (Hansen: col. 2, lines 63-65).

Conclusion

15.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tzeng (USPN 6,067,574) see col. 1, lines 26-39 which discloses that it is well known in the art to use an IP address in conjunction with the subnet mask stored for each ATM interface in the list to derive a destination IP address. Suzuki (USPN 5,796,736) see entire document which details ATM network discovery in an IP environment. Dobbins et al (USPN 5,509,123) see col. 4, lines 22-24. Hsieh et al (USPN 6,192,034) see entire document which is pertinent to claims 1, 7, and 13. Hoefelmeyer et al (USPN 6,385,204) see entire document which is pertinent to claims 1, 7, and 13.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.
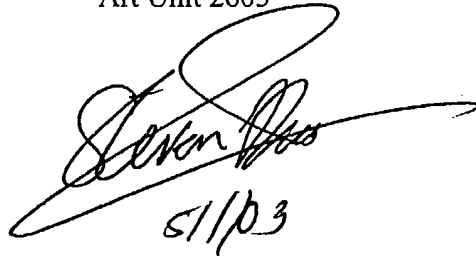
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-6743 for regular communications and (703)308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

Daniel J. Ryman
April 28, 2003